


**National
Aeronautical
Laboratory**
Documentation Sheet
Document Classification

UNCLASSIFIED

Title : LDV MEASUREMENTS IN TURBULENT JET
AND SEPARATED FLOWS.

Document No.

PD EA 9304

Date of issue: May 1993

Author(s) : K.T. Madhavan
G. Ramesh

Contents

Figures : 5

Division : Experimental Aerodynamics

No. of copies: 25

**External
participation** :

NAL Project No.

EA-1-171

Sponsor : AR & DB

Sponsor's Project No.

672

Approval : M.S. Swamy

Remarks :

Keywords : Laser Doppler/^{Velocimeter} LDV Data Processing Techniques, Turbulent Flows, Axisymmetric Jet, Conditional Sampling, Axisymmetric Boundary Layer, Flow Separation and Control.

Abstract :

This report briefly describes the progress made in the AR&DB project "LDV Measurements in Turbulent Jet and Separated Flows". A new scheme has been developed for the conditional sampling of data obtained by LDV in an axisymmetric jet. Zone averages of turbulent and non-turbulent regions of the jet obtained by this scheme compare favourably with those obtained by other methods. Results of LDV measurements of mean velocities, shear stress and kinetic energy made in the jet in the nearly self-preserving region have also shown good agreement with the standard results.